DOCUMENT RESUME

ED 343 480 HE 025 343

AUTHOR Walker, Merle; Avioli, Paula Smith
TITLE College Students' Perceptions of Their Misuse of Alcohol.
PUB DATE 91
NOTE 24p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Alcohol Abuse; *College Students; Dormitories; *Drinking; Environmental Influences; Fraternities; Group Experience; Higher Education; Parent Child Relationship; Parent Influence; Public Colleges; Sex Differences; Sororities; *Student Attitudes

ABSTRACT

A study was done of college students' perceptions of their own consumption of alcohol and their perception of their alcohol-related problems. The study surveyed 92 undergraduates students from a public college in northeastern United States. The sample was limited to students between the ages of 18 and 22. Fifty-four percent were female, and 46 percent were male. Forty-nine percent were members of a fraternity or sorority. However, the majority (54 percent) lived at home; 41 percent lived in dormitories; and 5 percent lived independently. Findings indicated that membership in a fraternity or sorority was associated with both higher rates of alcohol consumption and alcohol-related problems. Students living in college dormitories had higher levels of drinking than students who lived at home. With levels of drinking controlled, students who were members of a fraternity or sorority and whose parents more often drank heavily perceived that they themselves had more alcohol related problems. Parental drinking alone did not predict level of student drinking nor did gender or age. The data supported the position that environmental and situational factors encountered during the college years play an important role in determining young adults' drinking patterns. Included are 30 references and two tables. (JB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

HE

College Students' Perceptions of Their Misuse of Alcohol

Merle Walker, M.A.*

and

Paula Smith Avioli, PhD**

ED343480

*Case Manager
PSI/Creative Instruction
242 Old New Brunswick Road
Piscataway, New Jersey 08854

**Associate Professor of Psychology
Kean College of New Jersey, Union, New Jersey 07083
PAVIOLI@TURBO.KEAN.EDU

HE 025 343

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Merle Walker

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

X This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

BEST COPY AVAILABLE

College Students' Perceptions of Their Misuse of Alcohol

INDEX TERMS

Alcohol Related Problems

Fraternity/Sorority Membership

Dormitory

Sex Differences

ABSTRACT

Merle Walker, M.A.

&

Paula Smith Avioli, PhD

College Students' Perceptions of Their Misuse of Alcohol

Alcohol consumption may be responsible for many problems that young people are facing today. Ninety-two college students were surveyed as to their consumption of alcohol and their perception of their alcohol-related problems. Findings indicate that membership in a fraternity or sorority is associated with both higher rates of alcohol consumption and alcohol-related problems. Students living in college dormitories have higher levels of drinking alcohol than students who live at home. Even with level of drinking controlled, students who are members of a fraternity/sorority and whose parents more often drink heavily, perceive that they themselves have more alcohol-related problems. Implications of these findings are discussed with regards to college policy directed at teaching students in general, and fraternities/sororities specifically, as to how to handle alcohol responsibly.

College personnel now, perhaps more than ever before, are concerned with the pervasiveness of alcohol consumption among students and the problems that result. It is estimated that 93% of all undergraduate students drink alcohol[1]. College officials are now taking action to deal with the seriousness of college student drinking.

Whereas much research has focused on the factors that predict alcohol consumption among young adults, most research has narrowly defined drinking behavior. It has not been determined however, whether those factors which are thought to predict drinking also predict alcohol-related problems. To attain a better understanding of how alcohol consumption impacts the lives of college students, rather than focus on the quantity of alcohol consumed, this research seeks to ascertain the drinking-related problems experienced by college students.

This investigation is an exploratory study which asks college students about their drinking behavior in different contexts. Moreover, student perception regarding alcohol use rather than objective measures constitute the focus of this investigation. Students may more effectively be taught to handle alcohol responsibly once a better understanding is achieved of how students themselves view their alcohol-related problems.

Background

Traditionally, the approach to studying the problems of drinking has been to focus and define the problem in terms of the

amount of alcohol consumed. For example, Zweben defined heavy drinking days in terms of consuming five or more drinks[2]; McCrady, Noel, Abrams, Stout, Fisher-Nelson and Hay consider three to five drinks as moderate and six or more drinks as heavy drinking[3]. However, Chippenfield and Vogel-Sprott recognize the need to define alcohol consumption in terms of the consequences drinking has on the individual[4]. Similarly, Gonzalez in his recent study of students at the University of Florida at Gainesville surveyed students as to their alcohol related problems[5].

Rather than ask students how much alcohol they consume, this study examines student perception of their drinking behavior and to what extent they consider their drinking as problematic. Albeit student perception of their drinking and the reality of their drinking may differ, in keeping with a symbolic interactionist[6] and attribution theory approach[7], students' perceptions and definitions of situations may be regarded as primary in affecting their attitudes and actions. That is to say, the position taken here is that it is the perception of the situation, rather than the situation itself, that guides the student's behaviors.

A useful approach for explaining alcohol consumption on college campuses is provided by social learning theory. The basic social learning theory premise is that drinking is multiply determined by a mixture of biological, social, cultural and psychological forces and excessive consumption of alcohol is

learned behavior[8]. Wilson asserts that modeling is of particular importance in the initiation and maintenance of drinking behaviors[9] and the modeling effects on drinking has been documented experimentally[10]. Social learning theory will be applied in the discussion which follows regarding the literature on college student drinking.

Much of the research suggests that children of alcoholics, especially males, are at risk to abuse alcohol themselves[11]. Whereas some argue that this is due to a biological predisposition[12], others attribute this to social learning[13], and identification with the parent[14]. However, evidence suggests that individuals high in self-awareness are sensitized to the costs of alcohol use as modelled by alcohol-abusing parents and thus choose to be less involved with alcohol[13].

The research regarding gender differences in adolescent drinking behavior is inconsistent. Whereas, young men tend to have higher rates of alcohol consumption than young women[15,16,17,18,19], the proportion of women who now drink is increasing, perhaps due in part to the manner and extent to which drinking is portrayed in the media[9]. Moreover, both genders tend to drink more when they are in groups[20,21,22]. However, some research suggests that the role of expectations about alcohol's effects differentially impact the drinking behavior of men as compared to women[9].

What little research that has been conducted with regards to college students' alcohol-related problems has not been consistent with regards to gender differences. Whereas, Hanson and Engs found that generally males report more alcohol related problems than females[23], Gonzalez reported an increase in female students' alcohol related problems since the increase in the legal age for alcohol consumption[5].

Changes that occur during the college years may contribute to student drinking. College students comprise and define a subpopulation that is undergoing transition into adulthood. At college, the legal availability (for those over age 21) and the socially approved settings make alcohol consumption a less deviant behavior than it was previously[24]. Fraternity and sorority life has been associated with higher rates of alcohol abuse among college students[24,25]. In too many instances, fraternity/sorority related drinking has resulted in tragedy. For example, alcohol poisoning is associated with 97% of all hazing tragedies at American colleges and universities[26]. Environmental factors during the college years may also play an important role in determining young adults' drinking patterns. For example, alcohol consumption has been positively associated with student peer pressure for conformity[27], the first experience of living away from home in a dormitory or a fraternity or sorority house[25], as well as

fraternity/sorority group norms promoting drinking[24].

Thus, the research suggests that alcohol consumption among college students is predicted by gender, a parental history of heavy alcohol consumption, membership in a sorority or fraternity, and living away from the parental home. This investigation explores whether the above mentioned factors predict students' own perceptions of their alcohol consumption as well as their alcohol-related problems.

METHOD

Sample

Ninety-two undergraduate students from a public college in the northeastern United States participated in this study. The sample was limited to students between the ages of 18 and 22 years. Mean age of the sample was 19.85 (SD=1.13). Fifty-four percent of the sample was female (n=50), and 46% male (n=42). Forty-nine percent of the students were members of a fraternity or sorority (n=45). The majority (54%) of the students lived at home (n=47), with 41% living in the college dormitories (n=38) and only 5% living in their own apartments (n=5). It is essential to note that there are no fraternity houses or sorority houses on campus and there are no sections of dormitories designated for fraternity or sorority housing either. Fifty-two percent of the students reported that their parents never drank too much (n=48), 41% indicated that their parents did not often drink too much (n=38), and only 7% reporting that their parents often drank too much

(n=6).

Instrument

A questionnaire was developed by the authors asking students to evaluate their drinking behavior and drinking-related problems. (A copy of the questionnaire is available from the authors upon request.) Items were phrased in a multiple choice format. For example, one of the items used to assess student's drinking was:

"With fellow students, your drinking can best be described as:

heavy___, moderate ___, light ___, never ___."

This item was scored three for heavy, two for moderate, one for light and zero for never. This approach of measuring drinking behaviors is conceptually the same as that used by Mayer and Filstead in the Adolescent Alcohol Involvement Scale[29]. An item used to determine students' problems related to drinking was:

"How often has your drinking created problems for your family?

often ___ not often ___ never ___"

This item was scored two for often, one for not often and zero for never.

Level of drinking is the sum of the responses to five items which asked students the number of occasions per week they drink, and to rate their drinking at social functions, with fellow students, with friends, and with family members as heavy, moderate light or never. The scores for this index ranged from zero (no drinking) to 14 (high level of drinking for each item). Cronbach alpha equals .89 for this index indicating an acceptable level of reliability for

the index[30]. It is not surprising that this index had a relatively low reliability since it was composed of only two items. According to the Spearman Brown Prophecy formula, this index would attain an alpha of .935 if it were 10 items in length.

To assess the extent to which the student received complaints regarding his/her drinking, *Other's Response* is the sum of the responses to two items; how often has a relative and how often has a friend complained about your drinking. The scores for this index ranged from zero (no complaints) to four (often received complaints from both sources). Cronbach alpha equals .74 for this index. Given that this index has only five items, the reliability is fairly good. According to the Spearman Brown Prophecy formula, this index would attain an alpha of .80 if it were 10 items in length.

Five items were summed to determine to what degree the student has experienced problems due to his/her own drinking. The index *Problems* includes the following items: how often have you been unable to stop drinking; how often has your drinking created problems for your family, for your friends, for you at school; and how often have you drank until you are drunk. The scores for this index ranged from zero (never) to nine (often for all five items.) Cronbach alpha equals .67 for this index. The reliability rating for this index is actually quite good when one considers that the four items which comprise the index are conceptually measuring two constructs; occasions of drinking and alcohol related problems.

According to the Spearman Brown Prophecy formula, this index would attain an alpha of .826 if it were 12 items in length.

Students who indicated that they were members of either a fraternity or sorority were also scored on the index *Fraternity/Sorority*. It is composed of the four fraternity/sorority items: rate your drinking with fraternity brothers or sorority sisters, how often has a fraternity brother or sister complained about your drinking, is drinking part of your fraternity or sorority rituals, and does drinking take place on a regular night each week in the fraternity/sorority. The scores for this index range from zero (never) to a possible high of five. Cronbach alpha equals .613 for this index.[2]

The mean, standard deviation and range for each of the constructed indices is presented in Table 1.

- - - - - - - - - - - - - -

INSERT TABLE 1 ABOUT HERE

- - - - - - - - - - - - - -

Procedure

Permission to survey students was first secured from individual instructors and the director of student activities on campus. To attain a cross-section of the student population, three different undergraduate class sections were surveyed; an upper level psychology course, an upper level communications science course and an upper level sociology course. To insure sufficient numbers of fraternity/sorority members participated in the study,

packets of questionnaires were also distributed to all the fraternities and sororities through the office of the director of student activities. All students were informed in writing and verbally that the nature of the questionnaire was to survey young adult drinking behavior, that their participation was strictly voluntary and all responses would be totally anonymous. To enhance anonymity of response, students were surveyed in group settings; either in undergraduate classes or at fraternity or sorority meetings and at each site the questionnaires were returned collectively.

RESULTS

Preliminary analyses indicated that the male students, with a mean age of 20.43, tended to be older than the female students who had a mean age of 19.36 ($t=5.11$, $df=90$, $p<.0001$). There were no significant differences by residence for age however.

Chi-square analyses performed on the predictor variables indicated no relationship between gender and fraternity/sorority status nor between parental drinking and fraternity/sorority status or residence. However, more fraternity/sorority members lived in dormitories than non-members ($\chi^2=20.9$; $df=2$; $p<.0001$), more male students lived at home than female students ($\chi^2=10.48$; $df=2$; $p=.0053$) and more female students reported that their parents never drink too much than male students ($\chi^2=6.7$; $df=2$; $p=.035$). These relationships will be considered in the interpretation of the

findings.

Analysis of variance procedures were performed to determine whether gender, residence, fraternity/sorority membership, and parental drinking predicted the level of student drinking. Whereas, there were no effects of gender, parental drinking, nor any interaction effects, members of a fraternity/sorority were found to drink more than non-members ($F=17.90$; $df=1,81$; $p<.0002$). Residence was also significant ($F=5.31$; $df=2,79$; $p<.0071$). Sheffe post hoc comparisons indicated that students who live in the dormitories drink significantly more than students who live at home.

Since all the problems associated with drinking is confounded by the amount of drinking, it was decided to analyze the problem variables, controlling for level of student drinking. (Please refer to table 2). Thus, to determine whether gender, residence, fraternity/sorority membership and parental drinking contributed to the drinking related complaints students receive, independent of the level of student drinking, analysis of covariance procedures were performed. The results indicated that none of the above mentioned variables contributed to drinking-related complaints students receive, once level of drinking was controlled. In other words, drinking-related complaints students receive appears to be directly a function on the amount of alcohol they consume.

- - - - - - - - - - - - - -

INSERT TABLE 2 ABOUT HERE

- - - - - - - - - - - - - -

Similarly, to determine whether gender, residence, fraternity/sorority membership and parental drinking contributed to the extent to which students encountered drinking-related problems, independent of the level of student drinking, analysis of covariance procedures were performed. Although gender and residence had no effect on students' drinking-related problems, membership status and parental drinking did. Members of a fraternity or sorority reported more drinking-related problems than nonmembers adjusting for differences in their level of drinking ($F=4.93$; $df=1,78$; $p=.0275$), and students who report that their parents occasionally drink too much, report that they themselves have more drinking-related problems than their peers after adjusting for differences in their level of drinking ($F=3.16$; $df=2.88$; $p=.046$).

To determine whether gender, residence, and parental drinking contributed to the extent and nature of drinking associated with fraternities and sororities, independent of the level of student drinking, analysis of covariance procedures were performed on the sample of fraternity/sorority student members. Both gender and residence were found to significantly predict fraternity/sorority related drinking once the level of student drinking was controlled. Male students in fraternities reported more fraternity-related drinking and more fraternity-related alcohol problems than female students in sororities ($F=5.18$; $df=1,42$; $p=.026$).

Fraternity/sorority members who live at home with their parents report more fraternity/sorority related drinking and more fraternity/sorority related alcohol problems than fraternity/sorority members who live in the dormitories ($F=3.43$; $df=2,40$; $p=.041$).

DISCUSSION

Our findings indicate that membership in a fraternity or sorority is associated with both higher rates of alcohol consumption and alcohol-related problems. Whereas the finding of a relationship between fraternity/sorority membership and drinking has been well documented[24,25], it was not known previously that fraternity/sorority members perceive that they have more alcohol-related problems. Interpretation of our findings must be limited, however. The analysis performed cannot determine whether fraternity/sorority life caused the high level of drinking and drinking-related difficulties, or conversely, whether students who are more prone to alcohol abuse and alcohol-related problems are more likely to join a fraternity. Still, these findings would suggest that special efforts should be addressed to help students in general, and in fraternities/sororities specifically, handle alcohol responsibly. Getting students to control their own consumption may be the key to curbing drinking on campus, as the central assumption of social leaning theory is that alcohol is a social behavioral problem that can be modified[8].

Our data support the position that environmental and

situational factors encountered during the college years may also play an important role in determining young adults' drinking patterns. As predicted, students who live in the dormitories were found to drink significantly more than their peers. Heavier parental drinking was also associated with student perception of more alcohol-related problems, but contrary to prediction, this association was for students who report that their parents occasionally drank too much and not those students who report that their parents often drank too much. This may reflect a reluctance on the part of individuals to admit that a parent abuses alcohol, as only 7% of our sample fell into this category, or perhaps any parental intoxication sensitizes the adult child to his/her own potential for alcohol-related problems.

Notably, on the index of the extent and nature of drinking associated with fraternities and sororities, members who live at home with their parents scored significantly higher than members who live in the dormitories even after controlling for their level of drinking. Perhaps these commuting students are more sensitive to their drinking at their fraternities/sororities given the danger of driving while under the influence of alcohol. Similarly, the commuter may perceive his/her drinking patterns at the fraternity/sorority as excessive because unlike their sisters or brothers who reside in the dormitories, they leave the college environment and have the contrast of their home environment.

It is also important to note what was not found. Contrary to prediction, parental drinking did not predict level of drinking in this research as was similarly the case in Maney's research[17]. Gender also did not predict level of drinking although a gender difference was found with regards to fraternity/sorority drinking. Although it might be expected that males, having an older mean age and thus approaching legal age for drinking, might have greater levels of drinking, this too was not found. Most importantly, these findings suggest that the predictors of consumption are not isomorphic to the factors associated with alcohol-related problems.

Clearly, the issue of alcohol consumption among college students is complex. There are many different aspects of drinking behavior and various facets that require further investigation. Few blanket statements regarding college students' drinking apply. While fraternity/sorority membership has been a focus of this discussion, we do not wish to imply that all students who belong to a fraternity or sorority or who live in dormitories have problems with regards to alcohol. Indeed, student reports of their concerns regarding their use or abuse of alcohol may reflect a healthy phenomenon. But since legal statute, in and of itself, has not lessened college students' alcohol consumption, colleges may need to be more proactive in training students how to deal with alcohol.

REFERENCES

1. Duncan DF, Martin CE. Problems associated with three commonly used drugs: A survey of college students. Psychology of Addictive Behavior 1987;1:70-73

2. Zweben A. Problem drinking and marital adjustment. Journal of Studies on Alcohol 1986;47:167-172

3. McCrady BS, Noel NE, Abrams DB, Stout RL, Fisher-Nelson HF, Hay WH. Comparative effectiveness of three types of spouse involvement in outpatient behavioral alcoholism treatment. Journal of Studies on Alcohol 1986;47:459-466

4. Chippenfield B, Vogel-Sprott M. Family history of problem drinking among young male social drinkers: Modeling effects on alcohol consumption. Journal of Studies on Alcohol 1988;97:423-428.

5. Gonzalez GM. Effects of raising the drinking age and related campus initiatives on student alcohol consumption and alcohol-related problems. Journal of College Student Development 1990;31:181-183

6. Blumer H. Symbolic Interactionism: Perspective and Method. Englewood Cliffs, Prentice-Hall, 1969

7. Jones EE, Nisbett RE. The Actor and the Observer: Divergent Perceptions of the Causes of Behavior. Morristown, NJ, General Learning Press 1971

8. Lovibond SH. Behavioral control of excessive drinking. Progressive Behavior Modification 1977;5:63-109.

9. Wilson GT. Cognitive processes in addiction. British Journal of Addictions 1987;82:343-353

10. Caudill BD, Marlatt GA. Modeling influences in social drinking: An experimental analogue. Journal of Consulting and Clinical Psychology 1975;43:405-415

11. Roosa MW Sandler IN Beales J Short JL. Risk status of adolescent children of problem-drinking parents. American Journal of Community Psychology 1988;16:225-238

12. Schuckit MA Risch SC Gold EO. Alcohol consumption, ATCH level and family history of alcoholism. American Journal of Psychiatry 1988;145:1391-1395

13. Chassin L Mann L Sher KJ. Self-awareness theory, family history of alcoholism, and adolescent alcohol involvement. Journal of Abnormal Psychology 1988;2:206-217

14. Berlin R Davis RB Orenstein A. Adaptive and reactive distancing among adolescents from alcoholic families. Adolescence 1988;23:577-584.

15. Berkowitz AD Perkins HW. Recent research on gender differences in collegiate alcohol use. Journal of American College Health 1987;36:123-129

16. Cherry AL. Social bonding theory and alcohol use among college students. Journal of College Student Personnel 1987;28:128-135

17. Maney DW. Predicting university students' use of alcoholic beverages. Journal of College Student Development 1990;31:23-32

18. Wiggins JA Wiggins BB. Drinking at a southern university: Its description and correlates. Journal of Studies on Alcohol 1987;48:319-324

19. Samson HH Maxwell CO Doyle TF. The relationship of initial alcohol experience to current alcohol consumption in a college population. Journal of Studies on Alcoholism 1989;50:254-260

20. Claydon P. Self-report alcohol, drug and eating disorder problems among male and female collegiate children of alcoholics. Journal of American College Health 1987;36:111-116

21. Geller SE Russ NW Altomari MG. Natural observation of beer drinking among college students. Journal of Applied Behavior Analysis 1986;19:391-396

22. Koch-Hattem A Denman D. Factors associated with young adult alcohol abuse. Alcohol and Alcoholism 1987;22:181192

23. Hanson DJ Engs RC. Correlates of drinking problems among collegians. College Student Journal 1986;20:141-146

24. Brennan AF Walfish S AuBuchon P. Alcohol use and abuse in college students. The International Journal of the Addictions 1986;21:449-474

25. Faulkner KK Alcorn JD Garvin RB. Prediction of alcohol consumption among fraternity pledges. Journal of Alcohol and Drug Education 1987;34:12-20

26. Globetti G. Student residence arrangements and alcohol use and abuse: A research note. Journal of College and University Student Housing 1988;18;28-33

27. Hirshorn MW. Behavior of students in fraternities worsens on many campuses, as membership soars. Chronicle of Higher Education 1988;34:34-36

28. Sherry P Stolberg V. Factors affecting alcohol use by college students. Journal of College Student Personnel 1987;3: 350-355

29. Mayer J Filstead WJ. The adolescent alcohol involvement scale: An instrument measuring adolescent's use and misuse of alcohol. The Journal of Studies on Alcohol 1979;40:291-300

30. Cronbach LJ (1960). Essentials of Psychological Testing. (2nd ed.). New York, Harper & Row.

Table 1

Means and Standard Deviations of the Dependent Variables

INDEX	N	MEAN	STANDARD DEVIATION
Level of Drinking[a]	92	6.23	3.74
Other's Response[b]	92	.35	.78
Problems[c]	92	1.90	1.92
Fraternity/Sorority[d]	45	1.32	1.36

[a]Based on six items, the range of possible scores is 0 to 14.

[b]Based on two items, the range of possible scores is 0 to 4.

[c]Based on five items, the range of possible scores is 0 to 9.

[d]Based on four items, the range of possible scores is 0 to 5.

Table 2

Analysis of Covariance Procedures Controlling for Level of Drinking

	INDEX		
PREDICTOR	OTHER'S RESPONSE	PROBLEMS	FRATERNITY/ SORORITY[a]
Fraternity/Sorority Status			
Members	0.40 (7.78) (n=46)	2.32* (7.78) (n=46)	N. A.
Nonmembers	0.30 (4.11) (n=35)	1.41* (4.11) (n=35)	N. A.
Parental Drinking			
Never drank too much	0.21 (5.54) (n=48)	1.54* (5.54) (n=48)	2.62 (7.26) (n=23)
Not often drank too much	0.50 (7.11) (n=38)	2.40* (7.11) (n=38)	3.03 (8.55) (n=20)
Often drank too much	0.51 (6.17) (n=6)	1.68 (6.17) (n=6)	2.56 (9.50) (n=2)
Gender			
Male	0.42 (6.62) (n=42)	2.18 (6.62) (n=42)	3.27* (8.40) (n=20)
Female	0.29 (5.90) (n=50)	1.67 (5.90) (n=50)	2.42* (7.56) (n=25)
Residence			
Home	0.29 (5.26) (n=46)	1.83 (5.26) (n=46)	3.50* (7.08) (n=13)
Dormitory	0.47 (7.39) (n=38)	1.92 (7.39) (n=38)	2.53* (7.97) (n=29)
Apartment	0.13 (7.00) (n=5)	2.19 (7.00) (n=5)	1.65 (12.00) (n=2)

Note. Covariate mean presented in parenthesis
[a]Index only pertains to students who were members of a fraternity or a sorority
*The group means are significantly different at $p<.05$